



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

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STATEMENT OF LEGAL AND FACTUAL BASIS

Significant Permit Modification

Joint Expeditionary Base Little Creek
Virginia Beach, Virginia
Permit No. TRO-60033

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Joint Expeditionary Base Little Creek has applied for a Significant Modification to the Title V Operating Permit for its facility in Virginia Beach, Virginia. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact:

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Date:

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Date:

Regional Director:

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Date:

I. FACILITY INFORMATION

Permittee

Commander, Navy Region, Mid-Atlantic
Regional Environmental Group Code N457
1510 Gilbert Street
Norfolk, Virginia 23511-2737

Responsible Official

Sean S. Heaney
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Facility

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Virginia Beach, Virginia 23521

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County-Plant Identification Number: 51-810-00013

II. SOURCE DESCRIPTION

NAICS Codes: 928110 (9711) - National Security
336611 (3731) - Shipbuilding and repairing

The facility is a multi-disciplined United States Navy base that provides on-base facilities and services for the administrative and logistical support of operating forces, resident commands, organizations, home-ported ships, and other Navy and allied units. No products are manufactured at the facility. Various activities and operations are conducted to support the overhaul and repair activities for Navy vehicles, marine vessels, equipment, and buildings. In addition, the base is used as a training facility for the Atlantic fleet.

The facility is a Title V major source of SO₂, NO_x, CO, VOC, and HAP. This source is located in an attainment area for all pollutants, and is a PSD-size source. The facility is currently permitted under a State Operating Permit issued on June 24, 2009, amended on June 29, 2010, August 2, 2010, and August 8, 2011.

III. COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

IV. REQUESTED MODIFICATION AND REASON FOR MODIFICATION

The source has requested a modification to the Title V operating permit to incorporate the requirements of the June 29, 2010 and August 2, 2010 amendments to the State Operating Permit. The June 29, 2010 SOP amendment served to include generators ICGF-3816A-003 and ICGF-3816A-004, which replaced generators ICGF-3816A-001 and ICGF-3816A-002. The August 2, 2010 SOP amendment served to correctly list unit ICGF-3816A-004 as being subject to 40 CFR 63 Subpart ZZZZ. While reviewing the Title V modification request, it was discovered that replacement generators ICGF-3816A-003 and ICGF-3816A-004 were not properly evaluated for Article 8 (PSD) and Article 6 (Minor NSR) permitting applicability. The SOP was amended on August 8, 2011 to resolve this issue. The Title V is now being modified to incorporate the requirements of the 6/29/10, 8/2/10, and 8/8/11 SOP amendments.

V. APPLICABILITY OF 9 VAC 5-80-230

This permit modification involves the inclusion of new emission units; therefore, it will be processed using the significant modification procedures outlined in 9 VAC 5-80-230.

VI. CHANGES TO TITLE V OPERATING PERMIT

The changes to the State Operating Permit have been incorporated into the Title V permit as follows:

Section II (Emission Units):

- Generators ICGF-3816A-003 and ICGF-3816A-004 have been included in the equipment list. These generators were included in the 6/29/10 SOP amendment.
- Generators ICGF-3816A-001 and ICGF-3816A-002 have been removed from the equipment list. These generators were replaced by units ICGF-3816A-003 and ICGF-3816A-004 in the 6/29/10 SOP amendment and have been removed from the facility.

Section III (Abrasive Blasting Operations):

- Condition A.1: This condition has been added. It was included in the 6/29/10 SOP amendment.

Section V (Engines/Generators):

- Condition A.9: The unit reference numbers for the replacement Group V generators (ICGF-3816A-003 and ICGF-3816A-004) have been included in this condition. This change was included in the 6/29/10 SOP amendment.
- Condition A.10: A fuel sulfur limit of 0.5% has been included for Group V generator ICGF-3816A-003. This limit was included in the 8/8/11 SOP amendment. This unit did not trigger BACT for SO₂.
- Condition A.11: A fuel sulfur limit of 0.0015% has been included for Group V generator ICGF-3816A-004. This limit was included in the 8/8/11 SOP amendment. This unit triggered BACT for SO₂.
- Condition A.12: A combined fuel throughput limit has been included for the Group V generators. This limit was included in the 8/8/11 SOP amendment.
- Condition A.25: Emission limits for both Group V generators have been included. These limits were included in the 8/8/11 SOP amendment.
- Condition A.26: The unit reference numbers for the replacement Group V generators (ICGF-3816A-003 and ICGF-3816A-004) have been included in this condition. This change was included in the 6/29/10 SOP amendment.

- Condition B.1: The unit reference numbers for the replacement Group V generators (ICGF-3816A-003 and ICGF-3816A-004) have been included in this condition. This change was included in the 6/29/10 SOP amendment.
- Condition B.1.e: This condition has been changed to require the fuel sulfur content of only Group V generator ICGF-3816A-004 (instead of both Group V generators). This change was included in the 8/8/11 SOP amendment. As mentioned previously, this unit triggered BACT for SO₂, and a fuel sulfur limit of 0.0015% was established. The sulfur content of the fuel is required as part of the fuel certification to demonstrate compliance with this limit. Unit ICGF-3816A-003 did not trigger BACT for SO₂, so the maximum sulfur limit under the ASTM standard (0.5%) has been established for this unit. Because the established limit is the maximum sulfur content under the ASTM standard, a certification that the fuel meets the requirements of the ASTM standard also serves as a certification that the fuel meets the sulfur content requirements. No separate fuel sulfur content certification is necessary. In addition, the reference to Group II generator ICGF-1265-053 has been removed from Condition B.1.e. This reference was included inadvertently. Sulfur content certifications are only necessary for those units with a fuel sulfur limit less than the 0.5% maximum allowed under the ASTM standard (i.e. units ICGF-1265-059 and ICGF-3816A-004). These changes were made in the 8/8/11 SOP amendment.
- Condition C.3: This condition has been changed to require records of the fuel throughput through both Group V generators. This condition was included in the 8/8/11 SOP amendment when the combined fuel throughput limit was established.

Several other changes were also made while the permit was open. These changes are summarized below.

Section II (Emission Units):

- The list of engines/generators has been updated to include all engines/generators at the facility. Some of these units were previously listed in the Insignificant Units table in Section XIV; however, these units are now subject to the requirements of 40 CFR 63, Subpart ZZZZ and, therefore, can no longer be considered insignificant.
- The list of engines/generators has also been updated with all manufacture/installation dates (if known).
- The unit reference number for generator ICGF-1553-061 has been corrected to ICGF-1555-061. The stack ID number and building number have also been changed accordingly.
- Generators ICGF-Pier 1-057 and ICGF-1628-062 have been removed from the equipment list. These units have been removed from the facility.
- Generator ICGF-1625-001 has been included in the equipment list. This unit is a new 40 kW diesel emergency generator. This unit is exempt from Minor NSR permitting by size and fuel type.
- The “Gasoline Operations” section has been re-formatted for clarity.

Section V (Engines/Generators):

- A table has been included at the beginning of the section to list all of the applicable emission units and the applicable federal requirements (NSPS IIII/JJJJ and/or MACT ZZZZ). The dates of manufacture and installation have also been included, since these dates are necessary to determine applicability to the federal regulations.
- Condition A.3: This condition has been updated to include only the 0.0015% (15 ppm) sulfur limit for diesel fuel used after October 1, 2010.
- Condition A.13: The NSPS IIII requirements have been consolidated into one condition.
- Conditions A.14 through A.21: The MACT ZZZZ requirements have been revised to clarify which requirements apply to each type of engine.
- Condition A.22: The word “area” has been added to clarify that this requirement applies to area sources that become major sources.
- Condition B.2: The unit stack ID number for unit ICGF-3816A-004 has been included in this condition.

- Condition C.5: Instead of listing all units that are subject to each regulation, the phrase “the engines and generators listed in the table at the beginning of Section V as applicable to these subparts” has been added to the end of this condition.
- Condition C.6: The unit stack ID number for unit ICGF-3816A-004 has been included in this condition.

Section VII (Gasoline Operations):

- The unit reference number for the gasoline loading rack has been corrected to PETO-3838-001A. This change was made in the equipment list during the 7/13/09 Title V renewal, but the change was not carried into this condition.

Section XIV (Insignificant Emission Units):

- Tanks TNKA-1618-001, TNKA-1618-022, TNKA-NAB757-001, TNKA-NAB757-002, TNKA-3022-088, TNKA-1231-012, TNKA-3866-110, TNKA-3866-111, TNKA-CB304-119, TNKA-CB304-120, TNKA-CB318-036, TNKA-3882-054, TNKA-3882-055, TNKA-3882-056, and TNKA-3108-070 have been removed from the list of insignificant emission units. Tanks TNKA-3866-110 and 111 are permanently out of service and the others have been removed from the facility.
- The unit reference number for tank TNKA-3022-089 has been corrected to TNKA-3022-003.

Sections III, IV, VI, VII, VIII, IX, X, XI, and XII:

- A list of the applicable emission units has been included at the beginning of each section for clarity.

VII. PUBLIC PARTICIPATION

The public participation requirements in 9 VAC 5-80-270 apply to this significant permit modification. The proposed permit will be placed on public notice in The Virginian Pilot from August 5, 2011 to September 6, 2011.

VIII. PERMIT REVIEW BY EPA AND AFFECTED STATES

The EPA and affected states review requirements outlined in 9 VAC 5-80-290 apply to this significant permit modification.

A 45-day EPA review period is required. North Carolina is an affected state. In accordance with 9 VAC 5-80-290 B.1, the affected state will be notified of the draft significant permit modification when the public notice required under 9 VAC 5-80-270 is published.

IX. RESPONSE TO PUBLIC COMMENTS

Comments Received During Public Comment Period:

Comments were received on the draft Title V significant modification via e-mail on September 2, 2011. The e-mail has been included in the permit file for reference. The comments are also summarized below:

Comment #1 - The draft permit condition Section IV.B.2 requires monthly visual observations on each Group I boiler stack. No specific reference method for these visual observations is cited in the permit condition. This undefined method of performing the monthly visual observations does not appear to meet the minimum requirements of Subpart Dc found in 40 CFR 60.47c(a).

If the monthly visual observations at the JEB Little Creek facility are to be performed using EPA Method 22 (Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares), I believe that the permit should make reference to that method.

Comment #2 - 40 CFR 60.47c(a)(2)(i) and (ii) details the requirements for using EPA Method 22 for making visual observations. These requirements include, among other things, the duration and frequency of the observations. The draft permit condition in Section IV.B.2 does not appear to meet the requirements of 40 CFR 60.47c(a)(2) for using EPA Method 22.

Comment #3 - The draft permit condition Section IV.B.2 makes reference to performing a VEE using EPA Method 9 for six minutes with additional minutes performed depending on observed opacity. This draft permit condition does not appear to meet the requirements of 40 CFR 60.47c(a) regarding the observation period for using Method 9.

Comment #4 - The opacity monitoring required in 40 CFR 60, Subpart Dc is only required when oil is being combusted. This was confirmed in the U.S. EPA Applicability Determination Index, Control Number: 9700026 (Opacity Monitoring for Subpart Dc Boilers). In this determination, EPA confirmed that, "Since there is no applicable opacity standard for natural gas, opacity monitoring is not required when natural gas is the only fuel in use." Also, in the same document, EPA stated that, "Since there is no opacity standard for natural gas, the monitoring must only be conducted while oil is being combusted."

Draft permit condition Section IV.B.2 does not require that oil is being combusted when the opacity monitoring is performed. Does this draft permit condition meet the requirements and intent of 40 CFR 60.47c if there is no permit requirement to perform opacity monitoring when oil is being combusted? As written, the facility could choose to burn natural gas during the monthly visual observations and could meet the permit requirement. However, would the EPA emission monitoring requirements in 40 CFR 60.47c be met if the facility were not burning oil during the visual monitoring period?

40 CFR 60.47c(a) contains the language, "...of an affected facility combusting coal, oil, or wood that is subject to opacity standards under 60.43c...shall..." In order to meet the EPA frequency requirements for performing visual emission monitoring found in 40 CFR 60.47c, does the facility need to be combusting oil at the time of the visual monitoring period?

Response to Public Comments:

The comments received during the public comment period did not pertain to the changes made in the significant permit modification; therefore, the changes suggested by the commenter are outside the scope of this permit action. Nevertheless, a response e-mail was sent to the commenter on September 9, 2011. The e-mail has been included in the permit file for reference. The response is also summarized below:

40 CFR 60.47c states:

(a) Except as provided in paragraphs (c), (d), (e), (f), and (g) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under §60.43c shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system...

(g) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and that burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the permitting authority is not required to operate a COMS.

This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

Under §60.47c(g), a source that burns only gaseous fuels or fuel oils with a 0.5% sulfur content or less and operates according to an approved site-specific monitoring plan is not required to operate a COMS. The Group I boilers at Joint Expeditionary Base Little Creek are permitted to burn either natural gas or distillate oil with a maximum sulfur content of 0.2%, thus these units meet the fuel requirements under this section. The Title V permit includes periodic monitoring requirements for opacity from these boilers (Condition IV.B.2), which meet the criteria for a site-specific monitoring plan approved by the permitting authority under section (g).

Units exempt from the COMS requirement under §60.47c(g) are NOT required to conduct opacity monitoring under §60.47c(a). Opacity from these units is monitored under the approved site-specific monitoring plan. Therefore, 40 CFR 60.47c(a) does not apply to the JEBLC Group I boilers. VA DEQ previously approved the periodic monitoring requirements in Condition IV.B.2 for these units, which serve as the source's site-specific monitoring plan. EPA has reviewed these requirements without comment. No changes to this condition are necessary.